

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 9

In The Matter Of:

RIALTO-COLTON-FONTANA AREA  
NORTHEAST OPERABLE UNIT

SAN BERNARDINO COUNTY, CALIFORNIA

Emhart Industries Inc.,

(on behalf of West Coast Loading Corp.  
Kwikset Locks, Inc.,  
American Hardware Corporation);

Goodrich Corporation

Respondents.

U.S. EPA  
Docket No. 2003-11

Proceeding Under Section 106(a) of the  
Comprehensive Environmental Response,  
Compensation, and Liability Act of 1980,  
as amended, 42 U.S.C. § 9606(a), and  
under Section 7003 of the Solid Waste  
Disposal Act, as amended, 42 U.S.C. § 6973

ADMINISTRATIVE ORDER  
FOR REMEDIAL INVESTIGATION

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#### ATTACHMENTS

Attachment 1 Statement of Work

Attachment 2 Map showing location of the Site

1

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## I. INTRODUCTION AND JURISDICTION

3 1. This Order directs Emhart Industries Inc. and Goodrich  
4 Corporation, ("collectively "Respondents") to conduct a Remedial  
5 Investigation ("RI") for hazardous substances, pollutants and  
6 contaminants in and adjacent to a 160 acre area formerly operated  
7 by West Coast Loading Corporation and B.F. Goodrich in Rialto,  
8 California ("Site") and to reimburse the United States  
9 Environmental Protection Agency ("EPA") for all costs incurred by  
10 the EPA in connection with this Work. The Site is a portion of  
11 the Rialto-Colton Groundwater Basin. Pursuant to this Order,  
12 Respondents will conduct the Work described herein to investigate  
13 an imminent and substantial endangerment to human health or the  
14 environment that may be presented by the actual or threatened  
15 release of hazardous substances, pollutants, contaminants or solid  
16 wastes at or from the Site.

17 2. This Order is issued to Respondents by EPA pursuant to the  
18 authority vested in the President of the United States by Section  
19 106(a) of the Comprehensive Environmental Response, Compensation,  
20 and Liability Act of 1980, as amended, ("CERCLA"), 42 U.S.C.  
21 § 9606(a), and delegated to the EPA Administrator by Executive  
22 Order No. 12580, January 23, 1987, 52 Fed. Reg. 2923, as amended  
23 by Executive Order No. 13016, August 30, 1996, 61 Fed. Reg.  
24 45,871, further delegated to the EPA Regional Administrators by  
25 EPA Delegation No. 14-B and further delegated to the Superfund  
26 Division Director by Regional Delegations, dated September 29,  
27 1997. This Order is also issued under the authority vested in the  
28 Administrator of EPA by Section 7003 of the Solid Waste Disposal  
29 Act, commonly referred to as the Resource Conservation and  
30 Recovery Act of 1976 ("RCRA"), as amended by the Hazardous and  
31 Solid Waste Amendments of 1984, 42 U.S.C. § 6901 et seq. ("Act"),  
32 which authority has been duly delegated to the Regional

1 Administrator of EPA Region IX, and further delegated to the  
2 Directors of the Superfund and Waste Management Divisions by EPA  
3 Delegation No. 8-22-B, May 11, 1994, Regional Delegation R9-  
4 1280.20 (April 6, 1998).

5 3. In issuing this Order, EPA's objectives are to: (a) assess  
6 whether historical activities at the Site have resulted in a  
7 release or threatened release of hazardous substances,  
8 contaminants, or pollutants; (b) determine the nature and extent  
9 of contamination and any threat to human health or the environment  
10 caused by the release or threatened release of hazardous  
11 substances, pollutants, contaminants or solid wastes at or from  
12 the Site, and (c) to recover response and oversight costs incurred  
13 by the United States with respect to this Order.

14 4. The activities conducted under this Order are subject to  
15 approval by EPA, and Respondents shall provide all information for  
16 the RI that is consistent with CERCLA and the National Contingency  
17 Plan ("NCP"), 40 C.F.R. Part 300. The activities under this Order  
18 shall be conducted in compliance with the attached Statement of  
19 Work ("SOW"), attached hereto as Attachment 1, and all applicable  
20 EPA guidance, policies, and procedures.

## 21 II. FINDINGS OF FACT

22 5. The Site is located in the city of Rialto, California in  
23 western San Bernardino County. The Site is bounded by Casa Grande  
24 Park Avenue on the north, Locust Avenue on the east, an extension  
25 of Alder Avenue on the west, and an extension of Summit Avenue on  
26 the south. The Site lies within the Rialto-Colton groundwater  
27 basin ("the Basin").

28 6. The Basin is an important source of water to western San  
29 Bernardino County residents. From 1945 to 1994, water utilities

1 pumped an average of 4.8 billion gallons of groundwater from the  
2 basin per year. Numerous municipal water supply wells draw water  
3 directly from the basin.

4 7. Immediately downgradient of the Site is an area of groundwater  
5 contamination more than four miles long which extends from the  
6 City of Rialto into the City of Colton, and is depicted generally  
7 on the map attached as Attachment 2. The full extent of the  
8 contamination is not known. Known contaminants in the groundwater  
9 include perchlorate and trichloroethylene (TCE). Additional  
10 groundwater investigation is needed to define the extent of  
11 contamination and determine whether other contaminants are  
12 present.

13 8. The Site is currently used for industrial and commercial  
14 purposes. Land use surrounding the Site is mixed industrial,  
15 commercial, residential, and open space. The area immediately  
16 north of the Site is primarily residential, the area to the east  
17 is a mix of residential and industrial uses, the area to the south  
18 is a mix of commercial and industrial uses and open space, and the  
19 area to the west is primarily open space.

20 9. Perchlorate and TCE are present at elevated levels in  
21 municipal water supply wells downgradient of the Site.

22 10. Perchlorate is an inorganic ion present in several inorganic  
23 salts, including potassium perchlorate and ammonium perchlorate.  
24 Perchlorate salts have been used in flares, solid rocket fuel,  
25 fireworks, and other pyrotechnics. Perchlorate is not known to  
26 occur naturally in the United States. TCE is a chlorinated  
27 solvent commonly used for degreasing and cleaning.

1 11. Perchlorate is very soluble and mobile in surface water and  
2 groundwater, and does not readily degrade if released to the  
3 environment. TCE can also persist in groundwater for decades.

4 12. Respondent West Coast Loading Corporation ("WCLC") owned and  
5 operated the Site from 1952 to 1957. WCLC activities at the Site  
6 included the loading and assembly of munitions for the United  
7 States Army and United States Navy. The munitions included the  
8 M112 photoflash cartridge, the M115 ground burst simulator, and  
9 the XF-5A photoflash. WCLC produced more than 347,000 M112  
10 photoflash cartridges, 250 XF-5A cartridges, and 50,000 M115  
11 ground burst simulators.

12 13. On July 1, 1957, WCLC was merged into Kwikset Locks, Inc.  
13 ("KLI"). KLI sold the real property (and selected personal  
14 property) identified as the Site to the B. F. Goodrich Company on  
15 or about July 19, 1957. According to documents filed with the  
16 California Secretary of State and the United States Internal  
17 Revenue Service, all of the shares of KLI were purchased by the  
18 American Hardware Corporation on or before July 3, 1957. On June  
19 30, 1958, KLI was dissolved, the assets of KLI were transferred to  
20 the American Hardware Corporation, and the debts and obligations  
21 of KLI which were not paid or satisfied before the dissolution  
22 were assumed by the American Hardware Corporation. On June 30,  
23 1964, the American Hardware Corporation merged with Emhart  
24 Manufacturing Company, forming Emhart Corporation. In 1977,  
25 Emhart Corporation changed its name to Emhart Industries, Inc.

26 14. Emhart Industries, Inc. became a wholly owned subsidiary of  
27 Black & Decker Corporation in 1989 pursuant to a tender offer and  
28 merger agreement.

29 15. WCLC purchased, received, and subsequently processed at least  
30 47,000 pounds of potassium perchlorate for production of the M112

1 and XF-5A photoflash cartridges. KLI/WCLC documents reflect that  
2 each M112 cartridge contained at least 0.13125 lbs of potassium  
3 perchlorate and that WCLC loaded 347,530 M112 cartridges for KLI.  
4 KLI/WCLC documents reflect that each XF-5A photoflash cartridge  
5 contained at least 0.3636 pounds of potassium perchlorate and that  
6 at least 250 cartridges were produced. KLI/WCLC documents  
7 similarly reflect that 52,250 M115 ground burst simulator  
8 projectiles were produced, each containing 40% potassium  
9 perchlorate in the photoflash powder mix and 67% potassium  
10 perchlorate in the "Whistle Composition" mix. In 1957, WCLC also  
11 contracted with Grand Central Rocket Company to dry 43,240 pounds  
12 of ammonium perchlorate at the Site.

13  
14 16. In addition to potassium perchlorate, WCLC purchased, stored,  
15 or used the following chemicals: aluminum, barium nitrate, barium  
16 chromate, black powder, boron, carbon tetrachloride, ceric  
17 ammonium nitrate, cobalt, copper oxide, ethylene monolaurate, lead  
18 peroxide, lead styphnate, lead thiocyanate, lead azide, lithium  
19 hydride, magnesium powder, magnesium A, manganese dioxide,  
20 manganese dichromated, potassium chlorate, potassium nitrate,  
21 R.D.X, red phosphorous, sodium nitrate, sulfur,  
22 tetranitrocarbazole, zinc oxide, zirconium, and zirconium hydride.

23 17. Perchlorate salts and products containing perchlorate salts  
24 were handled or processed at WCLC in a variety of ways which may  
25 have led to a release to the environment. A WCLC document assumes  
26 that 3% of the potassium perchlorate purchased for the XF-5A  
27 photoflash would be lost as "spoilage." Another WCLC document  
28 estimates the potassium perchlorate "scrap allowance" for the M112  
29 photoflash cartridge at 462 pounds. Steps in the production of  
30 the M112 and XF-5A photoflash cartridges and the M115 ground burst  
31 simulator required WCLC to crush, pulverize, screen, weigh, mix,  
32 and/or fill cartridges with explosive/pyrotechnic mixtures  
33 containing potassium perchlorate.



1 18. Perchlorate may also have been released to the environment  
2 through routine, on-site disposal of wastewater. WCLC safety  
3 regulations specified that water and rinse water produced by  
4 mopping floors and washing sponges used to wipe off spillage  
5 "shall be taken to the disposal pit south of the plant site and  
6 drained into the ground." The regulations were written for the  
7 handling of "azides, styphnates, and similar explosives," but make  
8 several references to photoflash powder and other hazardous  
9 materials. In addition, perchlorate may have been released to the  
10 environment through burning, detonation, or combustion of products  
11 or wastes containing perchlorate. Periodic fires and explosions  
12 were reported during mixing, blending, and filling operations.

13 19. Respondent Goodrich Corporation ("Goodrich") operated at the  
14 Site from approximately 1957 to 1962. Goodrich's operations  
15 included grinding oxidizers, mixing propellant, pouring propellant  
16 into motor casings, and static-firing of solid propellant rocket  
17 motors. According to a signed declaration by a former Goodrich  
18 employee, solid rocket propellant consisted of ammonium  
19 perchlorate and other materials, and unused propellant was burned  
20 onsite in unlined pits.

21 20. Occidental Chemical Corporation reported the sale in 1963 of  
22 ammonium perchlorate to B.F. Goodrich Aerospace & Defense Products  
23 in Rialto, California.

24 21. Goodrich degreased the metal motor cases as a step in the  
25 production of solid propellant rocket motors. TCE was a commonly  
26 used degreasing agent in the 1960s and was used by other companies  
27 in Southern California engaged in similar operations.

28 22. Perchlorate is known to adversely affect the thyroid gland in  
29 humans, disrupting the thyroid gland's ability to utilize iodine

1 and produce thyroid hormones. Thyroid hormones are essential for  
2 proper development in newborns and children, and regulate  
3 metabolism in adults. Reduced levels of thyroid hormones can  
4 cause delayed neurological development, decreased learning  
5 capability, and tumor formation.

6 23. Geologic investigations have documented the highly permeable  
7 nature of the subsurface soils in the vicinity of the Site.

8 24. Perchlorate and/or TCE have been detected in and forced the  
9 closure of a number of municipal water supply wells downgradient  
10 of the Site. These wells previously had the capacity to produce  
11 thousands of gallons per minute of potable water. Additional  
12 wells are at risk of contamination.

13 25. At the closest well downgradient of the Site, a municipal  
14 water supply well in the City of Rialto owned by West Valley Water  
15 District (Well #22), perchlorate concentrations have been as high  
16 as 1,000  $\mu\text{g/L}$  and TCE concentrations have been as high as 76  $\mu\text{g/L}$ .  
17 TCE was detected at Well #22 as far back as 1989. Perchlorate was  
18 first analyzed for and detected at Well #22 in 1997.

19  
20 26. Perchlorate has also been detected at wells owned by the City  
21 of Rialto downgradient of the Site. In recent samples (June  
22 2003), perchlorate concentrations were 46  $\mu\text{g/L}$  at Rialto Well #2  
23 and 37  $\mu\text{g/L}$  at Rialto Well #6. TCE is also present in Rialto Well  
24 #2. In a recent sample (January 2003), the TCE concentration in  
25 well #2 was 5.9  $\mu\text{g/L}$ .

26 27. Perchlorate has also been detected at three wells owned by  
27 the City of Colton downgradient of the Site at concentrations  
28 exceeding the State of California action level of 4  $\mu\text{g/L}$  in  
29 drinking water supplies.

1 28. Groundwater contaminated with perchlorate and TCE continues  
2 to spread, thereby threatening additional domestic water supply  
3 wells which may present an imminent and substantial endangerment  
4 to human health or the environment.

5 III. CONCLUSIONS OF LAW AND DETERMINATIONS..

6 29. The Site is a "facility" as defined in Section 101(9) of  
7 CERCLA, 42 U.S.C. § 9601(9).

8 30. Respondents are a "person" as defined in Section 101(21) of  
9 CERCLA, 42 U.S.C. § 9601(21), and as defined in Section 1004(15)  
10 of RCRA, 42 U.S.C. § 6903(15), whose past or present handling,  
11 storage, treatment, transportation or disposal of "hazardous  
12 wastes" or "solid wastes" may present an imminent and substantial  
13 endangerment to health or the environment under Section 7003 of  
14 RCRA, 42 U.S.C. § 6973.

15 31. Respondents owned or operated the facility during a period of  
16 time when hazardous substances were disposed of and are therefore  
17 a "liable" party as defined in Section 107(a) of CERCLA, 42 U.S.C.  
18 § 9607(a), and are subject to this Order under Section 106(a) of  
19 CERCLA, 42 U.S.C. § 9606(a). Respondents are liable under Section  
20 7003 of RCRA, 42 U.S.C. § 6973, because they contributed to the  
21 handling, storage, treatment, transportation or disposal of  
22 hazardous wastes or solid wastes at the Site.

23 32. Perchlorate and TCE are each a "hazardous substance" as  
24 defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14) and,  
25 having been discarded, are a "solid waste" as defined in Section  
26 1004(27) of RCRA, 42 U.S.C. § 6903(27), which may present an  
27 imminent and substantial endangerment to human health or the  
28 environment under Section 106(a) of CERCLA, 42 U.S.C. § 9606(a)  
29 and Section 7003 of RCRA, 42 U.S.C. § 6973.

1 33. Migration of the hazardous substances and/or solid wastes  
2 disposed of at the Site into the soil and groundwater constitute a  
3 "release" and continuing threat of "release," as defined in  
4 Section 101(22) of CERCLA, 42 U.S.C. § 9601(22). Hazardous  
5 substances and/or solid wastes disposed of at the Site have  
6 migrated or threaten to migrate from the Site into the soil and  
7 groundwater impacting drinking water wells in the area.

8 34. The conditions at that Site described above constitute an  
9 actual or threatened "release," as defined in Section 101(22) of  
10 CERCLA, 40 U.S.C. § 9601(22).

11 35. The release or threat of release of one or more hazardous  
12 substances from the Site may present an imminent and substantial  
13 endangerment to the public health or welfare or the environment  
14 under Section 106(a) of CERCLA, 42 U.S.C. § 9606(a) and under  
15 Section 7003 of RCRA, 42 U.S.C. § 6973.

16  
17 36. The contamination and endangerment at this Site constitute an  
18 indivisible injury. The actions required by this Order are  
19 necessary to protect the public health, welfare, and the  
20 environment and are consistent with the NCP and CERCLA.  
21 Respondents are jointly and severally responsible for all of the  
22 work required under this Order.

23 37. Perchlorate and TCE disposed of at the Site are hazardous  
24 wastes or solid wastes that may present an imminent and  
25 substantial endangerment to health or the environment under  
26 Section 7003 of RCRA, 42 U.S.C. § 6973.

27  
28 38. There have been releases of hazardous substances at or from  
29 the Site as defined in Section 101(22) of CERCLA, 42 U.S.C.  
30 § 9601(22), including but not limited to the past disposal of

1 hazardous substances at the Site and the migration of hazardous  
2 substances from the Site.

3 39. The potential for future migration of hazardous substances  
4 from the Site poses a threat of a "release" as defined in Section  
5 101(22) of CERCLA, 42 U.S.C. § 9601(22).

#### 6 IV. NOTICE TO THE STATE

7  
8 40. On July 3, 2003, prior to issuance of this Order, EPA  
9 notified the California Regional Water Quality Control Board,  
10 Santa Ana Region, and the California Department of Toxic  
11 Substances Control, that EPA would be issuing this Order.

#### 12 V. ORDER

13 41. Based on the foregoing, Respondents are hereby ordered to  
14 comply with the following provisions, including but not limited  
15 to, all attachments to this Order, all documents incorporated by  
16 reference into this Order, and all schedules and deadlines in this  
17 Order and its attachments, or documents incorporated by reference  
18 into this Order.

#### 19 VI. DEFINITIONS

20  
21 42. Unless otherwise expressly provided herein, terms used in  
22 this Order which are defined in CERCLA, RCRA or in regulations  
23 promulgated under either statute shall have the meaning assigned  
24 to them in the statutes or their implementing regulations.  
25 Whenever terms listed below are used in this Order or in the  
26 documents attached to this Order or incorporated by reference into  
27 this Order, the following definitions shall apply:

1 "CERCLA" shall mean the Comprehensive Environmental Response,  
2 Compensation, and Liability Act of 1980, as amended, 42 U.S.C.  
3 §§ 9601 et seq.

4 "Day" shall mean a calendar day unless expressly stated to be  
5 a working day. "Working day" shall mean a day other than a  
6 Saturday, Sunday, or federal holiday. In computing any period of  
7 time under this Order, where the last day would fall on a  
8 Saturday, Sunday or federal holiday, the period shall run until  
9 the end of the next working day.

10  
11 "Effective Date" shall mean the effective date of this Order  
12 as provided in Section XXV.

13 "EPA" shall mean the United States Environmental Protection  
14 Agency.

15 "National Contingency Plan" or "NCP" shall mean the National  
16 Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42  
17 U.S.C. § 9605, codified at 40 C.F.R. Part 300, including any  
18 amendments thereto.

19 "Paragraph" shall mean a portion of this Order identified by  
20 an arabic numeral.

21 "Response Costs" shall mean all costs, including direct  
22 costs, indirect costs, and accrued interest incurred by the United  
23 States to perform or support response actions at the Site.  
24 Response costs include but are not limited to the costs of  
25 overseeing the Work, such as the costs of reviewing or developing  
26 plans, reports and other items pursuant to this Order and costs  
27 associated with verifying the Work.

1 "Statement of Work" or "SOW" shall mean the statement of work  
2 for implementation of the RI, as set forth in Attachment 1 to this  
3 Order.

4 "Section" shall mean a portion of this Order identified by a  
5 roman numeral and includes one or more Paragraphs.

6 "Site" shall mean the 160 acre area formerly operated by West  
7 Coast Loading Corporation and B.F. Goodrich in Rialto, California,  
8 as generally depicted in Attachment 2.

9 "State" shall mean the State of California.

10 "United States" shall mean the United States of America.

11 "Work" shall mean all activities Respondents are required to  
12 perform under this Order.

13 VII. NOTICE OF INTENT TO COMPLY

14 43. Respondents shall provide, not later than ten (10) days after  
15 the Effective Date of this Order, written notice to EPA's Remedial  
16 Project Manager ("RPM") stating whether they will comply with the  
17 terms of this Order. If each Respondent does not unequivocally  
18 commit to perform the Work as provided by this Order, it shall be  
19 deemed to have violated this Order and to have failed or refused  
20 to comply with this Order. Respondent's written notice shall  
21 describe, using facts that exist on or prior to the Effective Date  
22 of this Order, any "sufficient cause" defenses asserted by  
23 Respondent under Sections 106(b) and 107(c)(3) of CERCLA, 42  
24 U.S.C. §§ 9606(b) and 9607(c)(3). The absence of a response by  
25 EPA to the notice required by this Paragraph shall not be deemed  
26 to be acceptance of Respondents' assertions.

VIII. PARTIES BOUND

44. This Order shall apply to and be binding upon each Respondent and upon its directors, officers, employees, agents, successors, and assigns. Each Respondent is jointly and severally responsible for carrying out all activities required by this Order. No change in the ownership, corporate status, or other control of any of the entities referenced in this Paragraph shall alter any of Respondent's responsibilities under this Order. Each Respondent shall communicate and cooperate with the other Respondents. No change in the ownership, corporate status, or other control of any Respondent shall alter any of the Respondents' responsibilities under this Order.

45. Each Respondent shall provide a copy of this Order to any prospective owners or successors before a controlling interest in such Respondent's assets, property rights, or stock are transferred to the prospective owner or successor. Respondents shall provide a copy of this Order to each contractor, subcontractor, laboratory, or consultant retained to perform any Work under this Order, within five (5) days after the effective date of this Order or on the date such services are retained, whichever date occurs later. Respondents shall also provide a copy of this Order to each person representing any Respondent with respect to the Site or the Work and shall condition all contracts and subcontracts entered into hereunder upon performance of the Work in conformity with the terms of this Order. With regard to the activities undertaken pursuant to this Order, each contractor and subcontractor shall be deemed to be related by contract to Respondent within the meaning of Section 107(b)(3) of CERCLA, 42 U.S.C. § 9607(b)(3). Notwithstanding the terms of any contract, each Respondent is responsible for compliance with this Order and for ensuring that its contractors, subcontractors and agents



1 comply with this Order and perform any Work in accordance with  
2 this Order.

3 IX. WORK TO BE PERFORMED

4 46. Respondents shall cooperate with EPA in providing information  
5 regarding the Work to the public. As requested by EPA,  
6 Respondents shall participate in the preparation of such  
7 information for distribution to the public and in public meetings  
8 which may be held or sponsored by EPA to explain activities at or  
9 relating to the Site.

10 47. All aspects of the Work to be performed by Respondents  
11 pursuant to this Order shall be under the direction and  
12 supervision of a qualified project manager the selection of which  
13 shall be subject to approval by EPA. Within ten (10) days after  
14 the Effective Date of this Order, each Respondent shall notify EPA  
15 in writing of the name and qualifications of the project manager,  
16 including primary support entities and staff, proposed to be used  
17 in carrying out Work under this Order. If at any time Respondents  
18 propose to use a different project manager, Respondents shall  
19 notify EPA and shall obtain approval from EPA before the new  
20 project manager performs any Work under this Order.

21 48. EPA will review Respondents' selection of a project manager  
22 according to the terms of this Paragraph. If EPA disapproves of  
23 the selection of the project manager, Respondents shall submit to  
24 EPA within thirty (30) days after receipt of EPA's disapproval of  
25 the project manager previously selected, a list of project  
26 managers, including primary support entities and staff, that would  
27 be acceptable to Respondents. EPA will thereafter provide written  
28 notice to Respondents of the names of the project managers that  
29 are acceptable to EPA. Respondents may then select any approved  
30 project manager from that list and shall notify EPA of the name of

1 the project manager selected **within twenty-one (21) days** of EPA's  
2 designation of approved project managers.

3 49. Respondents shall conduct activities and submit deliverables  
4 as provided by the SOW found in Attachment 1. All such work shall  
5 be conducted in accordance with CERCLA, the NCP, and EPA guidance  
6 referenced in the SOW, as may be amended or modified by EPA. The  
7 general activities that Respondents are required to perform are  
8 identified below in the list of deliverables. The tasks that  
9 Respondents must perform are described more fully in the SOW and  
10 EPA guidance. The activities and deliverables identified below  
11 shall be developed as provided in the SOW and shall be submitted  
12 to EPA as provided. All Work performed under this Order shall be  
13 in accordance with the schedules herein, and in full accordance  
14 with the standards, specifications, and other requirements of the  
15 SOW, as initially approved or modified by EPA, and as may be  
16 amended or modified by EPA from time to time.

17 50. In accordance with the SOW, within thirty five(35) days of  
18 the Effective Date of this Order, Respondents shall submit to EPA  
19 and the State a Draft Remedial Investigation Work Plan.

20 51. In accordance with the SOW, within twenty-one (21) days of  
21 EPA's approval of the Remedial Investigation Work Plan,  
22 Respondents shall submit to EPA and the State a Sampling and  
23 Analysis Plan and Health and Safety Plan.

24 52. In accordance with the approved Remedial Investigation Work  
25 Plan and approved Sampling and Analysis Plan, Respondents shall  
26 install and sample groundwater monitoring wells and complete other  
27 field work.

1 53. In accordance with the approved Remedial Investigation Work  
2 Plan, Respondents shall submit a draft Remedial Investigation  
3 Report.

4 54. Respondents shall, prior to any off-site shipment of  
5 hazardous substances from the Site to an out-of-state waste  
6 management facility, provide written notification to the  
7 appropriate state environmental official in the receiving state  
8 and to EPA's RPM of such shipment of hazardous substances.  
9 However, the notification of shipments shall not apply to any such  
10 off-site shipments when the total volume of such shipments will  
11 not exceed 10 cubic yards.

12 (a) The notification shall be in writing, and shall  
13 include the following information, where available: (1) the name  
14 and location of the facility to which the hazardous substances are  
15 to be shipped; (2) the type and quantity of the hazardous  
16 substances to be shipped; (3) the expected schedule for the  
17 shipment of the hazardous substances; and (4) the method of  
18 transportation. Respondents shall notify the receiving state of  
19 major changes in the shipment plan, such as a decision to ship the  
20 hazardous substances to another facility within the same state, or  
21 to a facility in another state.

22 (b) The identity of the receiving facility and state will  
23 be determined by Respondents following the award of the contract  
24 for any phase of the Work. Respondents shall provide all relevant  
25 information, including information under the categories noted in  
26 Subparagraph (a) above, on the off-site shipments, as soon as  
27 practical after the award of the contract and before the  
28 hazardous substances are actually shipped.

29 55. Respondents shall not commence or undertake any Work at the  
30 Site without prior EPA approval.

1 56. Neither failure of EPA to expressly approve or disapprove of  
2 Respondents' submissions within any time period, nor the absence  
3 of comments, shall be construed as approval by EPA. Whether or  
4 not EPA gives express approval for Respondents' deliverables, each  
5 Respondent is responsible for preparing deliverables acceptable to  
6 EPA.

7 X. MODIFICATION OF WORK PLANS

8 57. In the event of conditions posing an immediate threat to  
9 human health or welfare or the environment, Respondents shall  
10 notify EPA and the State immediately. In the event of  
11 unanticipated or changed circumstances at the Site, Respondents  
12 shall notify the EPA RPM by telephone within twenty-four (24)  
13 hours of discovery of the unanticipated or changed circumstances.  
14 In addition to the authorities in the NCP, in the event that EPA  
15 determines that the immediate threat or the unanticipated or  
16 changed circumstances warrant changes in any workplan, EPA shall  
17 modify or amend the workplan in writing accordingly. Respondents  
18 shall perform each approved workplan as modified or amended.

19 58. EPA may determine that, in addition to tasks defined in this  
20 Order and attachments hereto, additional Work may be necessary to  
21 protect human health and the environment. If EPA determines that  
22 additional investigation activities are necessary, EPA may require  
23 Respondents to submit a workplan for additional investigation  
24 activities. EPA may also require that Respondents perform these  
25 investigation actions, including any approved modifications, if it  
26 determines that such actions are necessary to protect human health  
27 and the environment. EPA may also require Respondents to modify  
28 any plan, design, or other deliverable required by this Order.  
29 EPA reserves the right to conduct the work itself at any point, to  
30 seek reimbursement from Respondents, and/or to seek any other  
31 appropriate relief.

1 59. No later than thirty (30) days after receiving EPA's notice  
2 that additional response activities are required pursuant to this  
3 Section, Respondents shall submit a workplan for the response  
4 activities to EPA for review and approval. Upon approval by EPA,  
5 the workplan is incorporated into this Order as a requirement of  
6 this Order and shall be an enforceable part of this Order. Upon  
7 approval of the workplan by EPA, Respondents shall implement the  
8 workplan according to the standards, specifications, and schedule  
9 in the approved workplan. Respondents shall notify EPA of its  
10 intent to perform such additional response activities within seven  
11 (7) days after receipt of EPA's request for additional response  
12 activities.

#### 13 XI. PROGRESS REPORTS AND MEETINGS

14 60. Respondents shall assist EPA in making presentations at  
15 meetings at the request of EPA during the initiation, conduct, and  
16 completion of the Work under this Order. In addition to  
17 discussion of the technical aspects of the Work, topics will  
18 include anticipated problems or new issues. Meetings will be  
19 scheduled at EPA's discretion.

20 61. In addition to the deliverables set forth in this Order,  
21 Respondents shall provide to EPA monthly progress reports with  
22 respect to actions and activities undertaken pursuant to this  
23 Order by the tenth (10<sup>th</sup>) day of the following month. At a  
24 minimum, with respect to the preceding month, these progress  
25 reports shall: (a) describe the actions which have been taken to  
26 comply with this Order during that month; (b) include all results  
27 of sampling and tests and all other data received by Respondents  
28 not previously provided to EPA; (c) describe work planned for the  
29 next two (2) months with schedules relating such work to the  
30 overall project schedule for the Work; and (d) describe all

1 problems encountered and any anticipated problems, any actual or  
2 anticipated delays, and solutions developed and implemented to  
3 address any actual or anticipated problems or delays. These  
4 reports shall not be considered a substitute for notification to  
5 EPA in the event of an occurrence requiring emergency response.  
6 In addition, more frequent progress reports may be required during  
7 performance of certain Work activities.

8 XII. FINAL REPORTS, PROPOSED PLAN, RECORD OF DECISION AND  
9 ADMINISTRATIVE RECORD

10 62. EPA retains the responsibility for the release to the public  
11 of the report of any phase of the RI.

12 63. EPA will determine the contents of the administrative record  
13 file for selection of any response action. Respondents must  
14 submit to EPA documents developed during the course of the RI upon  
15 which selection of a response action may be based. Respondents  
16 shall provide copies of plans, task memoranda for further action,  
17 quality assurance memoranda and audits, raw data, field notes,  
18 laboratory analytical reports and other reports. Respondents must  
19 additionally submit any previous studies conducted under state,  
20 local or other federal authorities relating to selection of the  
21 response action, and all communications between Respondents and  
22 state, local or other federal authorities concerning selection of  
23 the response action.

24 XIII. SAMPLING AND DATA AVAILABILITY/ADMISSIBILITY

25 64. All results of sampling, tests, modeling or other data  
26 (including raw data) generated by Respondents, or on Respondents'  
27 behalf, during implementation of this Order, shall be submitted to  
28 EPA in the subsequent monthly progress report as described in  
29 Section XI of this Order.

1 65. Respondents shall use the quality assurance, quality control  
2 and chain of custody procedures described in the "EPA NEIC  
3 Policies and Procedures Manual" (May 1978, revised May, 1986),  
4 "Guidance for the Data Quality Objectives Process (QA/G-4)"  
5 (EPA/600/R-96/055, August 2000), "EPA Requirements for Quality  
6 Assurance Project Plans (QA/R5)" (EPA/240/B-01/003, March 2001),  
7 "Guidance on Quality Assurance Project Plans (QA/G-5)" (EPA/600/R-  
8 02/009, December 2002), EPA Region IX "Sampling and Analysis Plan  
9 Guidance and Template, Version 2" (March 2000 (R9QA/002)), and any  
10 amendments to these documents, while conducting all sample  
11 collection and analysis activities required herein by any plan.  
12 To provide quality assurance and maintain quality control,  
13 Respondents shall:

- 14 (a) Use only laboratories which have a documented Quality  
15 Assurance Program that complies with EPA guidance  
16 document EPA QA/R-5 "EPA's Requirements for Quality  
17 Assurance Project Plans;
- 18 (b) Ensure that the laboratory used by the Respondents for  
19 analysis performs according to a method or methods  
20 deemed satisfactory to EPA, is prepared to submit all  
21 protocols to be used for analyses to EPA at least 14  
22 days before beginning analysis (if requested), and  
23 maintains protocols according to the record preservation  
24 requirements included in Section XV.
- 25 (c) Ensure that EPA personnel and EPA's authorized  
26 representatives are allowed access to the laboratory and  
27 personnel utilized by the Respondents for analysis.

28 66. Respondents will verbally notify EPA not less than fourteen  
29 (14) days prior to conducting any sample collection activity or  
30 significant field events as described in any workplan or sampling  
31 and analysis plan. At EPA's verbal or written request, or the  
32 request of EPA's contractor, Respondents shall allow split or

1 duplicate samples to be taken by EPA and its authorized  
2 representatives of any samples collected by Respondents in  
3 implementing this Order. Nothing herein shall be construed to  
4 limit EPA's right to take any additional samples that EPA deems  
5 necessary.

6 67. Respondents may assert a claim of business confidentiality  
7 covering part or all of the information submitted to EPA pursuant  
8 to the terms of this Order under 40 C.F.R. Section 2.203, provided  
9 such claim is allowed by Section 104(e)(7) of CERCLA, 42 U.S.C.  
10 § 9604(e)(7). This claim shall be asserted in the manner  
11 described by 40 C.F.R. Section 2.203(b) and substantiated at the  
12 time the claim is made. Information determined to be confidential  
13 by EPA will be given the protection specified in 40 C.F.R. Part 2.  
14 If no such claim accompanies the information when it is submitted  
15 to EPA, it may be made available to the public by EPA or the State  
16 without further notice to Respondents. Respondents shall not  
17 assert confidentiality claims with respect to any data related to  
18 Site conditions, sampling, or monitoring.

19 68. Respondents shall maintain for the period during which this  
20 Order is in effect, an index of documents that the Respondents  
21 claim contain confidential business information. The index shall  
22 contain, for each document, the date, author, addressee, and  
23 subject of the document. Upon written request from EPA,  
24 Respondents shall submit a copy of the index to EPA.

#### 25 XIV. ACCESS

26 69. Respondents shall allow EPA and its authorized  
27 representatives and contractors to enter and freely move about all  
28 property at the Site to which Respondents have access and which is  
29 subject to or affected by the Work under this Order or where  
30 documents required to be prepared or maintained by the Order are



1 located, for the following purposes: (a) inspecting conditions,  
2 activities, the results of activities, records, operating logs,  
3 and contracts related to the Work or Respondents and their  
4 representatives or contractors pursuant to this Order; (b)  
5 reviewing the progress of Respondents in carrying out the terms of  
6 this Order; (c) conducting tests as EPA or its authorized  
7 representatives or contractors deem necessary; (d) using a camera,  
8 sound recording device or other documentary type equipment; and  
9 (e) verifying the data submitted to EPA by Respondents.

10 Respondents shall allow EPA and its authorized representatives to  
11 enter any property within the Site to which Respondents have  
12 access, to inspect and copy all records, files, photographs,  
13 documents, sampling and monitoring data, and other writings  
14 related to Work undertaken in carrying out this Order. Nothing  
15 herein shall be interpreted as limiting or affecting EPA's right  
16 of entry or inspection authority under Federal law.

17 70. To the extent that access to any portion of the Site or any  
18 other property, owned or controlled by persons other than  
19 Respondents is necessary in order to perform the Work required by  
20 this Order, Respondents will obtain, or use their best efforts to  
21 obtain, site access agreements with owners of property where the  
22 Work must be performed within thirty (30) days of the effective  
23 date of this Order. Should access to such property become  
24 necessary in the course of performing Work, Respondents will  
25 obtain, or use their best efforts to obtain, site access  
26 agreements within thirty (30) days after it becomes apparent that  
27 such access is necessary. Such agreements shall provide access  
28 for EPA, its contractors, the State and its contractors, and  
29 Respondents or their authorized representatives, and such  
30 agreements shall specify that Respondents are not EPA's  
31 representative with respect to liability associated with Site  
32 activities. Respondents shall save and hold harmless the United  
33 States and its officials, agents, employees, contractors,

1 subcontractors, or representatives for or from any and all claims  
2 or causes of action or other costs incurred by the United States  
3 including but not limited to attorneys fees and other expenses of  
4 litigation and settlement arising from or on account of acts or  
5 omissions of Respondents, their officers, directors, employees,  
6 agents, contractors, subcontractors and any persons acting on  
7 their behalf or under their control, in carrying out activities  
8 pursuant to this Order, including any claims arising from any  
9 designation of Respondents as EPA's authorized representatives  
10 under Section 104(e) of CERCLA, 40 U.S.C. § 9604(e).

11 71. Copies of such agreements shall be provided to EPA prior to  
12 Respondents' initiation of field activities. If access agreements  
13 are not obtained within thirty (30) days designated in the prior  
14 paragraph, Respondents shall immediately notify EPA of its failure  
15 to obtain access. EPA may obtain access for Respondents, perform  
16 those tasks or activities with EPA contractors, or terminate the  
17 Order in the event that Respondents cannot obtain access  
18 agreements. In the event that EPA performs those tasks or  
19 activities with EPA contractors and does not terminate the Order,  
20 Respondents shall perform all other activities not requiring  
21 access to that property and shall reimburse EPA for all costs  
22 incurred in performing such activities. Respondents additionally  
23 shall integrate the results of any such tasks undertaken by EPA  
24 into its reports and deliverables.

#### 25 XV. RECORD PRESERVATION

26 72. Respondents shall provide to EPA upon request copies of all  
27 documents and information within its possession and/or control or  
28 that of its contractors or agents relating to activities at or  
29 near the Site or to the implementation of this Order including,  
30 but not limited to, sampling, analysis, chain of custody  
31 manifests, trucking logs, receipts, reports, sample traffic

1 routing, correspondence, or other documents or information related  
2 to the Work. Respondents shall also make available to EPA for  
3 purposes of investigation, information gathering, or testimony,  
4 its employees, agents or representatives with knowledge of  
5 relevant facts concerning the performance of the Work.

6 73. Respondents shall preserve all records and documents in their  
7 possession that relate in any way to the Site during the conduct  
8 of this Order and for a minimum of ten (10) years after EPA  
9 provides notice that all Work required under this Order has been  
10 completed. Respondents shall preserve and retain copies of all  
11 documents that relate to the Site and shall instruct their  
12 contractors and agents to preserve and retain all records and  
13 documents in their possession or control that relate in any manner  
14 to the Site or the Work required herein. After this retention  
15 period, Respondents shall notify EPA at least ninety (90) days  
16 before the documents are scheduled to be destroyed. If EPA  
17 requests that the documents be saved, Respondents shall, at no  
18 cost to EPA, deliver the documents or copies of the documents to  
19 EPA.

20 74. Within forty-five (45) days after the Effective Date of this  
21 Order, each Respondent shall submit a written certification to  
22 EPA's RPM that it has not altered, mutilated, discarded, destroyed  
23 or otherwise disposed of any records, documents or other  
24 information relating to their potential liability with regard to  
25 the Site since notification of potential liability by the United  
26 States or the State or the filing of suit against it regarding the  
27 Site. Respondents shall not dispose of any such documents without  
28 prior written approval by EPA. Respondents shall, upon EPA's  
29 request and at no cost to EPA, deliver the documents or copies of  
30 the documents to EPA.

1                   XVI. ENDANGERMENT AND EMERGENCY RESPONSE

2    75. In the event of any action or occurrence during the  
3    performance of the Work which causes or threatens to cause a  
4    release of a hazardous substance or which may present an immediate  
5    threat to public health or welfare or the environment, Respondents  
6    shall immediately take all appropriate action to prevent, abate,  
7    or minimize the threat, and shall immediately notify EPA's RPM,  
8    or, if the RPM is unavailable, EPA's Alternative RPM. If neither  
9    of these persons is available, Respondents shall notify the EPA's  
10   Region IX Office of Emergency Response. Respondents shall take  
11   action in consultation with EPA's RPM and in accordance with all  
12   applicable provisions of this Order, including but not limited to  
13   the Health and Safety Plan. In the event that Respondents fail to  
14   take appropriate response action as required by this Section, and  
15   EPA takes that action instead, Respondents shall reimburse EPA for  
16   all costs of the response action not inconsistent with the NCP.  
17   Respondents shall pay the response costs in the manner described  
18   in Section XXII (Response Costs) of this Order, within thirty (30)  
19   days of Respondents' receipt from EPA of a demand for payment and  
20   a summary of the costs incurred.

21   76. Nothing in the preceding Paragraph shall be deemed to limit  
22   any authority of the United States to take, direct, or order all  
23   appropriate action to protect human health and the environment or  
24   to prevent, abate, or minimize an actual or threatened release of  
25   hazardous substances on, at, or from the Site.

26                   XVII. EPA REVIEW OF SUBMISSIONS

27   77. After review of any deliverable, plan, report or other item  
28   which is required to be submitted for review and approval pursuant  
29   to this Order, EPA may: (a) approve the submission; (b) approve  
30   the submission with modifications; (c) disapprove the submission

1 and direct Respondents to re-submit the document after  
2 incorporating EPA's comments; or (d) disapprove the submission and  
3 assume responsibility for performing all or any part of the  
4 response action. As used in this Order, the terms "approval by  
5 EPA," "EPA approval," or a similar term means the action described  
6 in (a) or (b) of this Paragraph. EPA approval shall be in  
7 writing.

8 78. In the event of approval or approval with modifications by  
9 EPA, Respondents shall proceed to take any action required by the  
10 plan, report, or other item, as approved or modified by EPA.

11 79. Upon receipt of a notice of disapproval or a request for a  
12 modification, Respondents shall, within fifteen (15) days or such  
13 longer time as specified by EPA, correct the deficiencies and  
14 resubmit the plan, report, or other item for approval.  
15 Notwithstanding the notice of disapproval, or approval with  
16 modifications, Respondents shall proceed, at the direction of EPA,  
17 to take any action required by any non-deficient portion of the  
18 submission.

19 80. If any submission is disapproved by EPA pursuant to  
20 Paragraphs 77 or 79 of this Section; Respondents shall be deemed  
21 to be in violation of this Order.

22  
23 XVIII. COMPLIANCE WITH APPLICABLE LAWS

24 81. All activities by Respondents pursuant to this Order shall be  
25 performed in accordance with the requirements of all federal and  
26 state laws and regulations. EPA has determined that the  
27 activities contemplated by this Order are consistent with the NCP.

28 82. Except as provided in Section 121(e) of CERCLA and the NCP,  
29 no permit shall be required for any portion of the Work conducted

1 entirely on-site (i.e., within the areal extent of contamination  
2 or in very close proximity of the contamination and necessary for  
3 implementation of the Work). Where any portion of the Work  
4 requires a federal or state permit or approval, Respondents shall  
5 submit timely applications and take all other actions necessary to  
6 obtain and to comply with all such permits or approvals.

7 83. This Order is not, and shall not be construed to be, a permit  
8 issued pursuant to any federal or state statute or regulation.

9 XIX. REMEDIAL PROJECT MANAGER

10 84. All communications, whether written or oral, from Respondents  
11 to EPA shall be directed to EPA's RPM and to the representative of  
12 the State of California designated below. Respondents shall  
13 submit to EPA three (3) copies of all documents, including plans,  
14 reports, and other correspondence, which are developed pursuant to  
15 this Order, and shall send these documents by certified mail,  
16 return receipt requested or overnight delivery. If requested by  
17 EPA, documents which Respondents have in electronic form shall  
18 also be sent by electronic mail.

19  
20 EPA's RPM is:

21  
22 Wayne Praskins  
23 75 Hawthorne Street SFD 7-3  
24 San Francisco, CA 94105  
25 (415) 972-3181  
26 praskins.wayne@epa.gov  
27

1 EPA's Alternative RPM is:

2  
3 Kathleen Salyer  
4 75 Hawthorne Street SFD 7-3  
5 San Francisco, CA 94105  
6 (415) 972-3267  
7 salyer.kathleen.wayne@epa.gov

8 The State of California representative is:

9 Kurt Berchtold  
10 California Regional Water Quality Control Board  
11 3737 Main St., Suite 500  
12 Riverside, CA 92501  
13 (909) 782-4130  
14 kberchto@rb8.swrcb.ca.gov

15 One or more copies of each deliverable shall also be sent to EPA's  
16 contractors, as specified by EPA's RPM.

17 85. EPA has the unreviewable right to change its RPM. If EPA  
18 changes its RPM, EPA will inform Respondents in writing of the  
19 name, address, and telephone number of the new RPM.

20 86. EPA's RPM shall have the authority lawfully vested in a RPM  
21 and an On-Scene Coordinator ("OSC") by the NCP, 40 C.F.R. Part  
22 300. EPA's RPM and Alternative RPM shall have authority,  
23 consistent with the NCP, to halt any work required by this Order,  
24 and to take any necessary response action.

1 XX. DELAY IN PERFORMANCE

2 87. Any delay in performance of this Order that, in EPA's  
3 discretion, is not properly justified by Respondents under the  
4 terms of this Section shall be considered a violation of this  
5 Order. Any delay in performance of this Order shall not affect  
6 Respondents' obligations to fully perform all obligations under  
7 the terms and conditions of this Order.

8 88. Respondents shall notify EPA of any delay or anticipated  
9 delay in performing any requirement of this Order. Such  
10 notification shall be made by telephone to EPA's RPM within forty-  
11 eight (48) hours after any Respondent first knew or should have  
12 known that a delay might occur. Respondents shall adopt all  
13 reasonable measures to avoid or minimize any such delay. Within  
14 five (5) business days after notifying EPA by telephone,  
15 Respondents shall provide written notification fully describing  
16 the nature of the delay, any justification for delay, any reason  
17 why Respondents should not be held strictly accountable for  
18 failing to comply with any relevant requirements of this Order,  
19 the measures planned and taken to minimize the delay, and a  
20 schedule for implementing the measures that will be taken to  
21 mitigate the effect of the delay. EPA may, in its sole and  
22 unreviewable discretion, grant an extension of any schedule for  
23 good cause shown. Increased costs or expenses associated with  
24 implementation of the activities called for in this Order are not  
25 a justification for any delay in performance.



1 XXI. ASSURANCE OF ABILITY TO COMPLETE WORK

2 89. Within sixty (60) days after the Effective Date of this  
3 Order, Respondents shall demonstrate the ability to complete the  
4 Work required in this Order and to pay all claims that arise from  
5 the performance of such Work. Within thirty (30) days of EPA  
6 approval of any subsequent workplan for any response action under  
7 this Order, Respondents shall demonstrate their ability to  
8 complete the Work specified by the workplan and to pay all claims  
9 that arise from the performance of such Work. Respondents shall  
10 demonstrate the ability to complete Work by obtaining and  
11 presenting to EPA one of the following: (a) a performance bond;  
12 (b) a letter of credit; (c) a guarantee by a third party; or (d)  
13 internal financial information to allow EPA to determine that  
14 Respondents have sufficient assets available to perform the Work.  
15 Respondents shall demonstrate financial assurance in an amount no  
16 less than the estimate of cost for the RI as described in the  
17 workplan, and, in the case of any future workplan, the estimate of  
18 cost for the response action described in that workplan. If  
19 Respondents seeks to demonstrate ability to complete the RI by  
20 means of internal financial information, or by guarantee of a  
21 third party, it shall re-submit such information annually, on the  
22 anniversary date of the issuance of this Order. If EPA determines  
23 that such financial information is inadequate, Respondents shall,  
24 within thirty (30) days after receipt of EPA's notice of  
25 determination, obtain and present to EPA for approval one of the  
26 other three forms of financial assurance listed above.

27 90. At least seven (7) days prior to commencing any Work at the  
28 Site pursuant to this Order, Respondents shall submit to EPA a  
29 certification that Respondents or their contractors and  
30 subcontractors have adequate insurance coverage or have  
31 indemnification for liabilities for injuries or damages to persons  
32 or property which may result from the activities to be conducted

1 by or on behalf of Respondents pursuant to this Order.  
2 Respondents shall ensure that such insurance or indemnification is  
3 maintained for the duration of the Work required by this Order.

4 XXII. REIMBURSEMENT OF RESPONSE COSTS

5 91. Respondents shall reimburse EPA, upon written demand, for all  
6 response costs incurred by the United States in overseeing  
7 Respondents' implementation of the requirements of this Order or  
8 in performing any response action which Respondents fail to  
9 perform in compliance with this Order. Response costs are all  
10 costs including, but not limited to, direct and indirect costs and  
11 interest, that EPA incurs in overseeing Respondents'  
12 implementation of the requirements of this Order, including  
13 development of this Order, reviewing or developing plans, reports  
14 and other items pursuant to this Order, verifying the Work, or  
15 otherwise implementing, overseeing, or enforcing this Order or in  
16 performing any response action which Respondents fail to perform  
17 in compliance with this Order.

18 92. On a periodic basis, EPA may submit to Respondents bills for  
19 response costs that include an itemized Cost Summary.

20  
21 93. Respondents shall, within thirty (30) days of receipt of each  
22 bill, remit a certified or cashier's check for the amount of those  
23 costs. Interest shall accrue from the later of the date that  
24 payment of a specified amount is demanded in writing or the date  
25 of the expenditure. The interest rate is the rate established by  
26 the Department of the Treasury pursuant to 31 U.S.C. § 3717 and 4  
27 C.F.R. § 102.13.

28 94. The Respondents shall make payments payable to "EPA Hazardous  
29 Substance Superfund" and mail to U.S. EPA - Region 9, ATTN:  
30 Superfund Accounting, P.O. Box 360863M, Pittsburgh, PA 15251. The

1 payment to EPA may instead be made by Electronic Funds Transfer  
2 ("EFT" or "wire transfer") in accordance with instructions  
3 provided by the RPM to the Respondents in the first bill for  
4 response costs. Any EFT received after 11:00 A.M. (Eastern Time)  
5 will be credited on the next business day. The Respondents shall  
6 send notice of the EFT to the RPM as provided in Paragraph 84 of  
7 this Order. All payments to the United States under this  
8 Paragraph shall reference the name and address of the party making  
9 payment, the Rialto-Colton-Fontana Area Site, Site # 09JW and EPA  
10 Docket # 2003-11.

11  
12 95. Respondents shall simultaneously transmit a copy of the check  
13 to EPA's RPM.

14 96. In the event that the payments for response costs are not  
15 made as required above, Respondents shall pay interest on the  
16 unpaid balance. Interest is established at the rate specified in  
17 Section 107(a) of CERCLA. Interest shall accrue at the rate  
18 specified through the date of the payment. Payments of interest  
19 made under this Paragraph shall be in addition to such other  
20 remedies or sanctions available to the United States by virtue of  
21 Respondents' failure to make timely payments under this Section.

22 XXIII. UNITED STATES NOT LIABLE

23 97. The United States, by issuance of this Order, assumes no  
24 liability for any injuries or damages to persons or property  
25 resulting from acts or omissions by Respondents, or their  
26 directors, officers, employees, agents, representatives,  
27 successors, assigns, contractors, or consultants in carrying out  
28 any action or activity pursuant to this Order. Neither EPA nor  
29 the United States may be deemed to be a party to any contract  
30 entered into by Respondents or their directors, officers,  
31 employees, agents, successors, assigns, contractors, or

1 consultants in carrying out any action or activity pursuant to  
2 this Order.

3 XXIV. ENFORCEMENT AND RESERVATIONS  
4

5 98. EPA reserves the right to bring an action against Respondents  
6 under Section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of any  
7 response costs incurred by the United States and not reimbursed by  
8 Respondents. This reservation shall include, but not be limited  
9 to, past costs, direct costs, indirect costs, the costs of  
10 oversight, the costs of compiling the cost documentation to  
11 support oversight cost demand, as well as accrued interest as  
12 provided in Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

13 99. Notwithstanding any other provision of this Order, at any  
14 time during the response action, EPA may perform its own studies,  
15 complete the response action, or any portion thereof, as provided  
16 in CERCLA and the NCP, and seek reimbursement from Respondents for  
17 its costs, or seek any other appropriate relief.

18 100. Nothing in this Order shall preclude EPA from taking any  
19 additional enforcement actions, including modification of this  
20 Order or issuance of additional orders, and/or remedial or removal  
21 actions as EPA may deem necessary, or from requiring Respondents  
22 in the future to perform additional activities pursuant to Section  
23 106(a) of CERCLA, 42 U.S.C. § 9606(a), et seq., Section 7003 of  
24 RCRA, 42 U.S.C. § 6973, or any other applicable law. Respondents  
25 shall be liable under CERCLA Section 107(a), 42 U.S.C. § 9607(a),  
26 for the costs of any such additional actions.

27 101. Notwithstanding any provision of this Order, the United  
28 States hereby retains all of its information gathering, inspection  
29 and enforcement authorities and rights under CERCLA, RCRA and any  
30 other applicable statutes or regulations.

1 102. Respondents shall be subject to civil penalties under  
2 Section 106(b) of CERCLA, 42 U.S.C. § 9606(b), of not more than  
3 \$27,500 for each day in which Respondents willfully violates, or  
4 fails or refuses to comply with this Order without sufficient  
5 cause. In addition, failure to properly provide response actions  
6 under this Order, or any portion hereof, without sufficient cause,  
7 may result in liability under Section 107(c)(3) of CERCLA, 42  
8 U.S.C. § 9607(c)(3), for punitive damages in an amount at least  
9 equal to, and not more than three times the amount of any costs  
10 incurred by the Fund as a result of such failure to take proper  
11 action.

12 103. Nothing in this Order shall constitute or be construed as a  
13 release from any claim, cause of action or demand in law or equity  
14 against any person for any liability it may have arising out of or  
15 relating in any way to the Site.

16 104. If a court issues an order that invalidates any provision of  
17 this Order or finds that a Respondent has sufficient cause not to  
18 comply with one or more provisions of this Order, all Respondents  
19 shall remain bound to comply with all provisions of this Order not  
20 invalidated by the court's order.

21  
22 XXV. EFFECTIVE DATE AND COMPUTATION OF TIME

23 105. This Order shall be effective ten (10) days after it is  
24 signed by the Superfund Division Director. All times for

1 performance of ordered activities shall be calculated from this  
2 Effective Date.

3 XXVI. OPPORTUNITY TO CONFER

4 106. Within five (5) days after receipt of this Order;  
5 Respondents may request a conference regarding the provisions of  
6 this Order. EPA shall deem a failure to request a conference as a  
7 waiver of the opportunity to confer prior to the Effective Date.

8 107. If requested, the conference shall occur prior to the  
9 Effective Date provided in Section XXV, unless the Effective Date  
10 and conference date are extended by mutual agreement of the  
11 Parties, at EPA's Regional Office at 75 Hawthorne Street, San  
12 Francisco, California. The conference shall be with EPA's  
13 Superfund Division Branch Chief, or whomever the Branch Chief may  
14 designate.

15  
16 108. At any conference held pursuant to this Section, Respondents  
17 may appear in person, or be represented by an attorney or other  
18 representative. The purpose and scope of any such conference held  
19 pursuant to this Order shall be limited to issues involving the  
20 actions required by this Order and the extent to which Respondents  
21 intend to comply with this Order. If a conference is held,  
22 Respondents may present any evidence, arguments or comments  
23 regarding this Order, its applicability, any factual  
24 determinations on which the Order is based, the appropriateness of  
25 any action that the Respondents are ordered to take, or any other  
26 relevant and material issue. Any such evidence, arguments or  
27 comments should be reduced to writing and submitted to EPA within  
28 three (3) days following the conference. The conference is not an  
29 evidentiary hearing, and does not constitute a proceeding to  
30 challenge this Order. It does not give Respondents a right to  
31 seek review of this Order or to seek resolution of potential

1 liability, and EPA will make no official record of the conference.  
2 If Respondents do not request a conference, any evidence,  
3 arguments or comments may be submitted in writing within three (3)  
4 days following the Effective Date of this Order. Any such writing  
5 should be directed to the following address:

6 Michele S. Benson  
7 Environmental Protection Agency  
8 75 Hawthorne Street, ORC-3  
9 San Francisco, CA 94105  
10 (415) 972-3918

11 109. Requests for a conference must be by telephone followed by  
12 written confirmation mailed that day to EPA's RPM, Wayne Praskins  
13 (415) 972-3181, U.S. EPA Region IX, 75 Hawthorne Street (SFD 7-3),  
14 San Francisco, CA 94105.

15 So Ordered, this 14<sup>th</sup> day of July, 2003.

16 BY: \_\_\_\_\_

*Keith Takata*

17 Keith Takata  
18 Director, Superfund Division  
19 U.S. Environmental Protection Agency, Region IX





**ATTACHMENT 1 TO ADMINISTRATIVE ORDER 2003-11**

**STATEMENT OF WORK  
REMEDIAL INVESTIGATION**

**RIALTO-COLTON-FONTANA AREA  
NORTHEAST OPERABLE UNIT**

**SAN BERNARDINO COUNTY, CALIFORNIA**

July 14, 2003

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**Attachment 1: Summary of Major Tasks/Submittals for the Remedial Investigation**

**Attachment 2: Selected Regulations, Guidance, and Other References**

## INTRODUCTION

Respondents shall conduct a Remedial Investigation (RI) in accordance with the Administrative Order for Remedial Investigation, Docket 2003-11 ("the Order"), this Statement of Work, and relevant EPA guidance (see Attachment 2 to the SOW for a partial list of guidance). The major tasks and deliverables required by the Order are: 1) an RI Work Plan; 2) a Sampling and Analysis Plan; 3) a site Health and Safety Plan; 4) implementation of field work required by the Work Plan in accordance with the Sampling and Analysis and Health and Safety Plans; and 5) an RI report. If EPA concludes that additional work is needed after implementation of the approved Work Plan, EPA may require Respondents to submit an addendum to the approved Work Plan or a new Work Plan. A summary of the major tasks and deliverables and a schedule for their submittal is provided as Attachment 1 to this SOW. The RI Work Plan and Sampling and Analysis Plan must be approved by EPA prior to the initiation of field activities. Respondents shall furnish all necessary personnel, materials, and services needed, or incidental to, performing the RI, except as otherwise specified in the Order.

EPA will be responsible for oversight of the Respondents' activities throughout the RI. EPA contractors and/or staff of the Santa Ana Regional Water Quality Control Board may assist EPA in providing field oversight.

### 1 PURPOSE

Respondents shall conduct a Remedial Investigation (RI) to investigate whether historical activities at the Site resulted in a release of hazardous substances, contaminants, or pollutants, and investigate the nature and extent of soil and/or groundwater contamination resulting from any releases.

### 2 MINIMUM INVESTIGATION REQUIREMENTS

At a minimum, Respondents shall conduct sampling, testing, analysis, and measurement activities including, but not limited to, collection and analysis of soil and groundwater samples, to meet the following requirements.

#### 2.1 Soil Sampling

**2.1.1 Sample locations:** Soil samples should be collected to determine whether releases may have occurred at locations where perchlorate salts, trichloroethylene (TCE), or other hazardous substances, contaminants, or pollutants may have been used, handled, stored, or disposed. Sampling should be proposed to assess the impact of each activity listed in Table 1, or a rationale provided if sampling is not proposed.

**Table 1. Locations where perchlorate salts, TCE, or other hazardous substances, contaminants, or pollutants may have been handled, stored, or disposed**

Activity	Location
Storage, weighing, mixing, and blending location for potassium perchlorate (WCLC)	Former West Coast Loading Co. (WCLC) Bldg. 40
Blending location for perchlorate mix for M115 ground burst simulator (WCLC)	Former WCLC Bldg. 41
Filling machine location; possible use or storage area for potassium perchlorate (WCLC)	Former WCLC Bldg. 42
Screening and drying location for potassium perchlorate (WCLC)	Former WCLC Bldg. 47
Drying location for potassium perchlorate (WCLC)	Former WCLC Bldg. 12
Photoflash powder storage location (WCLC)	Former WCLC Bldg. 10
Scrap material storage area (WCLC)	"North end" of former WCLC Bldg. 27
Former facility landfill (WCLC)	To be determined
Former burn areas for scrap explosives and scrap combustibles (WCLC)	To be determined
Disposal areas (WCLC)	Disposal pit reportedly "south of the plant site"
Oxidizer grinding area (Goodrich)	To be determined
Solid propellant drying and weighing area (Goodrich)	To be determined
Solid propellant mixer buildings (Goodrich)	To be determined
Solid propellant casting/loading areas (Goodrich)	To be determined
Rocket motor casing degreasing area (Goodrich)	To be determined
Research area (Goodrich)	To be determined
Laboratory, which included facilities for propellant mixing and testing (Goodrich)	To be determined
Rocket motor "static firing" test area (Goodrich)	To be determined
Burn/disposal areas for unused propellant (Goodrich)	Disposal pit reportedly "in the backyard of the laboratory"

## 2.2 Groundwater Monitoring

- 2.2.1 Groundwater Wells:** A minimum of three wells should be installed, developed, and sampled downgradient of potential source areas associated with former West Coast Loading Co. (WCLC) and B.F. Goodrich (Goodrich) operations, and a minimum of one well should be installed, developed, and sampled upgradient of potential source areas associated with WCLC and Goodrich operations.
- 2.2.2 Borehole Depth.** Because significant downward hydraulic gradients are present in groundwater at the Site, wells should be drilled to at least 100 feet beyond the depth at which groundwater is first encountered. Actual borehole depth should depend on the results of samples collected during drilling, as described in Section 2.2.3 below. Estimated depth to water is 400 to 450 feet below ground surface (bgs).
- 2.2.3 Water Quality Sampling During Drilling:** At each well, water levels shall be monitored and depth-specific groundwater samples should be collected during drilling (before installation of the permanent casing and screen) utilizing temporary wells. At a minimum, samples should be collected at the following depths: 1) when groundwater is first encountered (sample A); 2) approximately 25 to 50 feet after groundwater is first encountered (sample B); and 3) approximately 75 to 100 feet after groundwater is first encountered (sample C). Sampling should continue at increasing depth if samples B or C exceed background levels for Site-related chemicals (as identified in the approved Work Plan). Sampling should continue at increasing depth until two consecutive samples are at or below Practical Quantitation Limits or background levels for Site-related chemicals (as identified in the approved Work Plan).
- 2.2.4 Well Construction:** One or more permanent wells shall be constructed in each borehole. At least one well should be constructed with a permanent screen near the water table. If Site-related chemicals are found above background levels in a lower water bearing unit at a significantly lower hydraulic head, a well should also be constructed with a permanent screen in the lower water bearing unit. Wells should be screened at similar elevations in each water-bearing unit to facilitate comparisons among wells.
- 2.2.5 Water Quality Sampling after Well Construction:** Water quality samples shall initially be collected and analyzed monthly for three consecutive months and then quarterly (every three months) for a period of 36 months, unless EPA agrees to a reduced duration or frequency.
- 2.2.6 Groundwater Elevation Measurements:** Water levels shall be measured monthly for a period of 36 months, unless EPA agrees to a reduced duration or frequency.
- 2.2.7 Analytes:** Unless it can be demonstrated that a chemical is unlikely to reach groundwater at a level of toxicological concern, the Plan should provide for the analysis of all Site-related chemicals. Site-related chemicals include chemicals

which were either: 1) known to have been purchased, stored, or used at the Site; 2) commonly associated with chemicals known to have been purchased, stored or used at the Site; 3) commonly associated with Site activities; or 4) present in groundwater wells immediately downgradient of the Site above background levels. Table 2 provides a preliminary list.

**Table 2. Preliminary list of Site-related chemicals**

<b>VOCs</b>
perchloroethylene (PCE)
trichloroethylene (TCE)
1,1-dichloroethene
1,1-dichloroethane
1,2-dichloroethane
cis-1,2-dichloroethylene
trans-1,2-dichloroethylene
1,2-dichloroethylene
vinyl chloride
methylene chloride
1,1,1-trichloroethane
dichlorodifluoromethane
carbon tetrachloride
<b>Metals</b>
arsenic
nickel
zinc
vanadium
aluminum
copper
lead
manganese
boron
barium
chromium (total and hexavalent))
cobalt
zinc
magnesium
lithium (component of lithium hydride)
cerium (component of ceric ammonium nitrate)

zirconium
<b>Anions</b>
perchlorate
sulfate
nitrate
chlorate
<b>Other</b>
R.D.X
1,4-dioxane (common additive to chlorinated solvents)
lead styphnate
tetranitrocarbazole
lead azide
lead thiocyanate
N-nitrosodimethylamine (NDMA)
synthetic rubber precursors (used to manufacture solid propellant rocket fuel)

**2.2.8 Practical Quantitation Limits:** If feasible, the Practical Quantitation Limit for perchlorate should be no higher than 1  $\mu\text{g/L}$ . Practical Quantitation Limits for other analytes should be no higher than the lowest of the following: EPA Maximum Contaminant Level (EPA-MCL), California Maximum Contaminant Level (CA-MCL), California Action Level (AL). If there is no EPA-MCL, CA-MCL, or AL available for an analyte, the Practical Quantitation Limit for the analyte should be no higher than the EPA Preliminary Remediation Goal (PRG) for the Tap Water exposure pathway. PRGs are available on the EPA Region 9 website at: <http://www.epa.gov/region09/waste/sfund/prg/files/02table.pdf>

### 3 REQUIRED TASKS/ SUBMITTALS

#### 3.1 Develop and Submit an RI Work Plan

In accordance with the schedule included as Attachment 1, Respondents shall develop and submit to EPA for review and approval an RI Work Plan. Unless EPA agrees otherwise, the Work Plan should include the following elements:

- a brief description of the Site, including its location, past and current site activities, and any significant ecological, cultural or natural resource features;
- a description of the roles and responsibilities of organizations and key personnel involved in the RI, including lines of authority;

- a summary of existing information on the hydrogeology of the Rialto-Colton basin and adjoining areas, including subsurface stratigraphy, a description of the aquifer system, and influences on and temporal variation in groundwater elevations and flow;
- a summary of existing information on groundwater quality at and in the vicinity of the Site, including the nature, extent, and movement of perchlorate, TCE, and other contaminants in the groundwater, and an assessment of the quality and usefulness of existing data;
- a description of planned soil and groundwater investigation activities, including a preliminary estimate of the approximate number, depth, and location of soil samples; the number, location, depth, and construction of groundwater monitoring wells; and the duration and frequency of water quality sampling and water level elevation measurements;
- the rationale for proposed soil sampling locations, in relation to potential source areas;
- the rationale for proposed groundwater monitoring well locations and screen intervals, in relation to potential source areas, groundwater elevations and flow direction, and aquifer structure;
- a complete list of chemicals meeting the criteria listed in Section 2.2.7, a list of analytes for soil and groundwater analyses, background levels for each analyte; and a rationale for any Site-related chemicals not included as analytes. (The rationale should consider the reactivity, volatility, solubility, and other properties of the chemical.)
- plans for securing property and/or access agreements and satisfying permit requirements;
- a description of tasks to be performed and work products that will be submitted, including a detailed outline of the RI Investigation Report;
- provisions for weekly reporting to EPA by fax or email during soil sampling, installation of groundwater monitoring wells, and other periods of significant field work;
- a schedule for each task and deliverable, including all field work and submittal of a draft RI Report;
- the estimated cost of implementing the Work (to support compliance with Section XXII of the Order).

After EPA review, EPA may direct Respondents to prepare a final Work Plan which satisfactorily address EPA's comments.

### **3.1 Develop and Submit a Sampling and Analysis Plan**

In accordance with the schedule included as Attachment 1, Respondents shall prepare a Sampling and Analysis plan (SAP) to ensure that the data meet Data Quality Objectives (DQOs) and that sample collection and analytical activities are conducted in accordance with technically acceptable protocols. The SAP consists of a field sampling plan (FSP) and a quality assurance project plan (QAPP) and should be prepared in accordance with the following EPA guidance:



"Guidance for the Data Quality Objectives Process (QA/G-4)" (EPA/600/R-96/055, August 2000)

EPA Region 9 "Sampling and Analysis Plan Guidance and Template, Version 2" (R9QA/002, March 2000)

"EPA Requirements for Quality Assurance Project Plans (QA/R5)" (EPA/240/B-01/003, March 2001)

"Guidance on Quality Assurance Project Plans (QA/G-5)" (EPA/600/R-02/009, December 2002)

The FSP should define in detail the sampling and data-gathering methods that will be used on the project. Unless EPA agrees otherwise, it should include: descriptions of sampling objectives; sample locations and frequencies; numbers and types of samples (including QC samples); sampling equipment and equipment decontamination procedures; sampling and data collection methods; sample labeling; sample packaging and shipment; sample analysis; well construction; well development procedures; management of drill cuttings, well development water, purge water produced during sampling, and other investigation-derived wastes; field documentation requirements; and planned uses of the data.

The QAPP should describe the project objectives and organization, functional activities, data quality objectives (DQOs), and quality assurance and quality control (QA/QC) protocols that will be used to achieve the desired DQOs. The DQOs shall, at a minimum, reflect use of analytical methods for obtaining data of sufficient quality to meet National Contingency Plan requirements as identified at 40 CFR 300 et. seq. In addition, the QAPP should address sample custody, analytical procedures, data reduction, data validation procedures to ensure that reported data are accurate and defensible, personnel qualifications, data management, procedures that will be used to enter, store, correct, manipulate, and analyze data; protocols for transferring data to EPA in electronic format; document control procedures, and preservation of records (in accordance with Section XVI of the Order).

Respondents should be prepared to demonstrate to EPA's satisfaction that each laboratory it may use is qualified to conduct the proposed work. This includes use of methods and analytical protocols for the chemicals of concern in the media of interest within detection and quantification limits consistent with both QA/QC procedures and DQOs in the approved QAPP for the site. The laboratory must have and follow an approved QA program. Respondents should only use laboratories which have a documented Quality Assurance Program which complies with ANSI/ASQC E-4 1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995) and "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01-002, March 2001) or equivalent documentation as determined by EPA. EPA may consider laboratories accredited under the National Environmental Laboratory Accreditation Program ("NELAP") as meeting the Quality System requirements. If the laboratory is not in the CLP program, a laboratory QA program must be submitted for EPA review and approval. EPA may require that Respondents submit detailed information to demonstrate that the laboratory is qualified to conduct the work,

including information on personnel qualifications, equipment and material specifications. Respondents will provide assurances that EPA has access to laboratory personnel, equipment and records, sample collection, transportation and analysis.

After EPA review, EPA may direct Respondents to prepare a final SAP Work Plan which satisfactorily address EPA's comments.

### **3.2 Site Health and Safety Plan**

In accordance with the schedule included as Attachment 1, Respondents shall prepare and submit a Health and Safety Plan in conformance with the Respondents' health and safety program, and in compliance with OSHA regulations and protocols. The Health and Safety Plan should address or provide employee training, a health and safety risk analysis, a description of monitoring and personnel protective equipment, medical monitoring, standard operating procedures, contingency plans, and site control. The Health and Safety Plan is not subject to EPA approval; however, EPA will review the Plan to ensure that all necessary elements are included, and that the Plan provides for the protection of human health and the environment.

### **3.3 Field Work**

Respondents shall perform field activities in accordance with the EPA-approved Work Plan, the approved SAP, and the site Health and Safety Plan. As required by Section XIV of the Order, Respondents should verbally notify EPA not less than fourteen (14) days prior to conducting any sample collection activity or significant field events as described in any workplan or sampling and analysis plan.

### **3.4 Submittal of Analytical Data and Well Construction Information**

All groundwater elevation measurements and soil and groundwater analytical data, whether or not validated, shall be submitted to EPA and the State of California as soon as available, no later than 30 days after groundwater elevation measurements or sample shipment to the laboratory, whichever is applicable. Samples submitted for analysis during drilling, as described in Section 2.2.3, should be submitted no later than 48 hours after sample shipment to the laboratory. Submittals should be accompanied by information on well location and elevation, well screen elevation, sampling locations, and other information needed to interpret the submitted data.

All analytical data, properly validated, shall be submitted in electronic form within 90 days of sample shipment to the laboratory. Written documentation of the validation process and results should be provided.

Complete well construction information, including borehole logs and construction details, shall be submitted no later than 90 days after completion of a well.

### **3.5 Remedial Investigation (RI) Report**

Respondents shall prepare and submit a draft RI report to EPA for review and approval in accordance with the EPA-approved Work Plan. Unless EPA agrees otherwise, this report should include the following:

- a summary of field activities, including any deviations from the approved Work Plan or SAP;
- a summary, in tabular form, of groundwater elevation measurements, other field measurements, and analytical results generated in accordance with this SOW;
- figures depicting the extent of soil contamination at the Site;
- figures depicting groundwater elevations, interpreted groundwater elevation contours, and approximate directions of groundwater flow at and in the vicinity of the Site. The figures should make use of data generated in accordance with this SOW and data from nearby wells, including monitoring wells installed at the Mid-Valley Sanitary Landfill and public water supply wells. Assumptions made in interpreting data should be clearly documented;
- figures depicting the horizontal and vertical extent of contamination in groundwater at and in the vicinity of the Site for each Site-related chemical exceeding MCLs, CA-MCLs, or CA-AL. The figures should make use of data generated in accordance with this SOW and data from nearby wells, including monitoring wells installed at the Mid-Valley Sanitary Landfill and public water supply wells. Assumptions made in interpreting data should be clearly documented;
- recommendations for any additional investigation work needed to satisfy the objectives of this SOW.

After EPA review, Respondents will prepare a final RI report which satisfactorily address EPA's comments. If EPA determines that additional investigation activities are necessary, EPA may also require Respondents to submit a new Work Plan or addendum to the approved Work Plan.

### **3.6 Develop and Submit Periodic Reports**

Respondents shall submit periodic progress reports in accordance with Section XII of the Order.

**Attachment 1**  
**Summary of Major Tasks/Submittals for the Remedial Investigation**

	<b>TASK/ DELIVERABLE</b>	<b>DUE DATE (calendar days)</b>
1.	Draft Remedial Investigation (RI) Work Plan	30 days after the effective date of the Order
2.	Draft Sampling and Analysis Plan (SAP) and Health and Safety Plan (HASP)	21 days after approval of RI Work Plan
3.	Field Work	In accordance with approved Work Plan
4.	Draft Remedial Investigation (RI) Report	In accordance with approved Work Plan
5.	Initial Data Submittal	30 days after measurement or sample shipment to the laboratory
6.	Validated Data Submittal	90 days after sample shipment to the laboratory
7.	Well Construction Information	90 days after completion of a well.

## Attachment 2

### Selected Regulations, Guidance, and Other References

The following list, although not comprehensive, comprises many of the regulations and guidance documents that apply to the RI process:

National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule, Federal Register 40 CFR Part 300, March 8, 1990. (as revised)

"Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA," U.S. EPA, Office of Emergency and Remedial Response, October 1988, OSWER Directive No. 9355.3-01.

"Guidance for the Data Quality Objectives Process (QA/G-4)" (EPA/600/R-96/055, August 2000)

EPA Region 9 "Sampling and Analysis Plan Guidance and Template, Version 2" (R9QA/002, March 2000)

"EPA Requirements for Quality Assurance Project Plans (QA/R-5)" (EPA/240/B-01/003, March 2001).

"Guidance on Quality Assurance Project Plans (QA/G-5)" (EPA/600/R-02/009, December 2002)

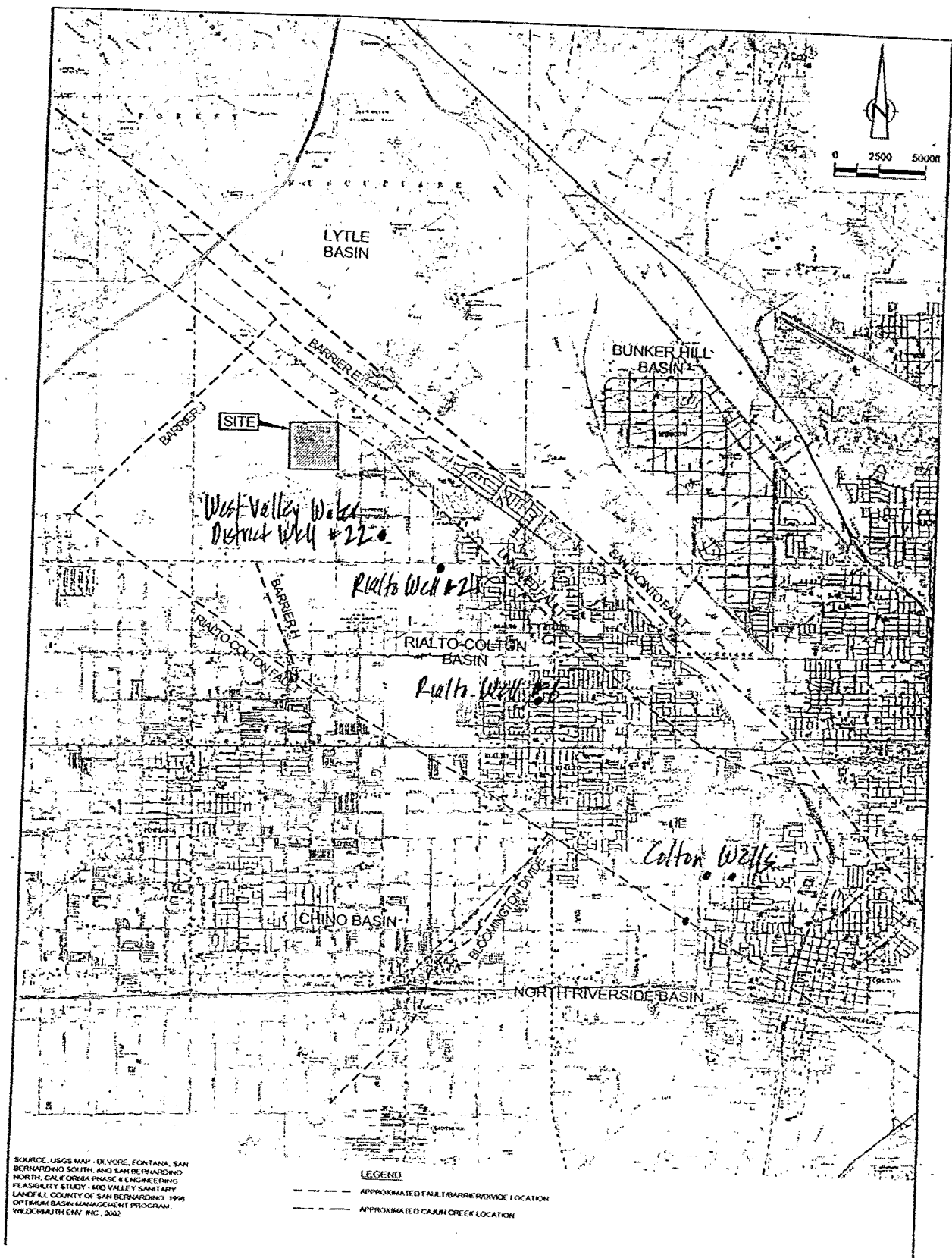
Guide to Management of Investigation-Derived Wastes, U.S. EPA, Office of Solid Waste and Emergency Response, Publication 9345.3-03FS, January 1992.

USEPA Contract Laboratory Program Statements of Work for Inorganic and Organic Analysis, U.S. EPA, Office of Emergency and Remedial Response (see <http://www.epa.gov/superfund/programs/clp/> for most recent versions).

Woolfenden, Linda, and Kathryn M. Koczot, "Numerical Simulation of Ground-Water Flow and Assessment of the Effects of Artificial Recharge in the Rialto-Colton Basin, San Bernardino County, California," U.S. Geological Survey Water-Resources Investigations Report 00-423, 2001.

Woolfenden, Linda, and Dina Kadhim, "Geohydrology and Water Chemistry in the Rialto-Colton Basin, San Bernardino County, California," U.S. Geological Survey Water-Resources Investigations Report 97-4012, 1997

EPA Preliminary Remediation Goals (PRG) available at:  
<http://www.epa.gov/region09/waste/sfund/prg/files/02table.pdf>



Attachment 2 to the UAO: Map showing Site location (modified from CRA, 2002)